

CLAIMS

1. A method of charging against prepaid credit in a communication network, the method comprising the steps of:

requesting establishment of a call between a first terminal and a second terminal;

ascertaining whether any costs generated by accounting clients in the network, and associated with the call, are to be charged against prepaid credit;

in the event some or all of the costs are to be charged against prepaid credit, establishing an accounting session between an accounting server and the accounting client that will generate the costs to be charged against the prepaid credit, the accounting session being allocated an accounting session identifier;

establishing the call with the second terminal;

sending charging update data from the accounting client to the accounting server during the call; and

collating the charging update data in the accounting server on the basis of the accounting session identifier, thereby enabling updating of the prepaid credit during the call.

2. A method according to claim 1, wherein there are a plurality of accounting clients that generate costs in relation to the call, the method including the steps of;

establishing accounting sessions between each respective accounting client and the accounting server, each of the accounting sessions being allocated a common accounting session identifier associated with the call to be established;

sending charging update data from each of the accounting clients to the accounting server during the call, the charging update data including the accounting session identifier; and

5 collating the charging update data from each of the accounting clients on the basis of the accounting session identifier, thereby enabling updating of the prepaid credit during the call.

10 3. A method according to claim 1 or 2, wherein the accounting server is located in the home network of the first terminal;

4. A method according to any one of the preceding
15 claims, wherein each accounting client takes the form of one of the following network entities:

SGSN/GGSN;

S-CSCF/P-CSCF; and

a network application server.

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5. A method according to any one of the preceding claims, wherein the accounting session identifier is allocated upon receipt in the network of the request for establishment of a call from the first terminal.

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6. A method according to any one of the preceding claims, wherein the request for establishment of a call is made via a Session Initiation Protocol (SIP) message sent from the first terminal.

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7. A method according to any one of the preceding claims, wherein the charging update data is sent from the

accounting clients to the accounting server via a Diameter protocol message.

8. A method according to claim 7, wherein the charging
5 update data is sent from each accounting client to the accounting client in response to a Diameter protocol update request issued by the accounting server.

9. A method according to claim 8 wherein the accounting
10 server issues the update requests to each accounting client periodically.

10. A method according to any one of the preceding
claims, wherein the step of ascertaining whether costs
15 are to be charged against prepaid credit includes the step of looking up subscriber profile data upon receipt of the request for establishment of the call.

11. A method according to any one of the preceding
20 claims, wherein the network is an IP-network.

12. A method according to claim 11, wherein the network is a UMTS network.

25 13. Communication network apparatus configured to allow charging against prepaid credit in relation to a first terminal, the network including an accounting server and an accounting client capable of generating costs associated with a service in the network, the network
30 being configured to:

accept a request from the first terminal for establishment of a call between the first terminal and a second terminal;

ascertain whether any costs generated by accounting clients in the network, and associated with the call, are to be charged against prepaid credit;

5 in the event some or all of the costs are to be charged against prepaid credit, establish an accounting session between the accounting server and the accounting client that will generate the costs to be charged against the prepaid credit, the accounting session being allocated an accounting session identifier; and

10 establish the call with the second terminal;

wherein the accounting client is configured to send charging update data to the accounting server during the call; and

15 the accounting server is configured to collate the charging update data on the basis of the accounting session identifier, thereby enabling updating of the prepaid credit during the call.

14. Communication network apparatus according to claim 20 13, including a plurality of accounting clients that generate costs in relation to the call, the network being configured to;

25 establish accounting sessions between each respective accounting client and the accounting server, each of the accounting sessions being allocated a common accounting session identifier associated with the call to be established;

30 wherein each of the accounting clients is configured to send charging update data to the accounting server during the call, the charging update data including the accounting session identifier; and

the accounting server is configured to collate the charging update data from each of the accounting clients

on the basis of the accounting session identifier, thereby enabling updating of the prepaid credit during the call.

5 15. Communication network apparatus according to claim 13 or 14, wherein the accounting server is located in the home network of the first terminal;

10 16. Communication network apparatus according to any one of claims 13 to 15, wherein each accounting client takes the form of one of the following network entities:

SGSN/GGSN;

S-CSCF/P-CSCF; and

a network application server.

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17. Communication network apparatus according to any one of claims 13 to 16, configured such that the accounting session identifier is allocated upon receipt in the network of the request for establishment of a call from
20 the first terminal.

18. Communication network apparatus according to any one of claims 13 to 17, wherein the request for establishment of a call is made via a Session Initiation Protocol (SIP)
25 message sent from the first terminal.

19. Communication network apparatus according to any one of claims 13 to 18, wherein the charging update data is sent from the accounting clients to the accounting server
30 via a Diameter protocol message.

20. Communication network apparatus according to claim 19, wherein the charging update data is sent from each

accounting client to the accounting client in response to a Diameter protocol update request issued by the accounting server.

- 5 21. Communication network apparatus according to claim 20 wherein the accounting server issues the update requests to each accounting client periodically.

- 10 22. Communication network apparatus according to any one of claims 13 to 21, configured to ascertain whether costs are to be charged against prepaid credit by looking up subscriber profile data upon receipt of the request for establishment of the call.

- 15 23. Communication network apparatus according to any one of claims 13 to 22, wherein the network is an IP-network.

24. Communication network apparatus according to claim 23, wherein the network is a UMTS network.